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ORIGINAL
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Body image across three generations of Americans: Inter-family correlations, gender differences, and generation differences

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ABSTRACT. *Three-hundred-and-eighty-one participants (undergraduates, their parents and grandparents) completed body image (BI; current minus ideal figure ratings) and dieting attitude measures. We found the usual gender gap in BI for the undergraduates (females' BI worse than males'), but not for the parents and grandparents. This was due to males' worsening BI with age; females' BI did not differ across generations. The gender gap in dieting attitudes (females more likely to diet) also narrowed with increasing age (again due to males' changing attitudes), but remained significant across generations. In all three generations, females underestimated the size of the figure males found most attractive, whereas males overestimated the analogous figure for females. Finally, we found significant inter-family correlations for BI and dieting for all groups except undergraduate females. We discuss these results within cultural and evolutionary theoretical frameworks.*

(Eating Weight Disord. 9: 186-193, 2004). ©2004, Editrice Kurtis

INTRODUCTION

Fallon et al. (1) reported that undergraduate females had significantly worse body image than did undergraduate males, and that females tended to underestimate, but males to overestimate, the size of figure the other gender found most attractive. Rozin et al. (2) replicated these findings, and extended them to two generations (undergraduates and their parents). Daughters, mothers, and fathers all had worse body image than did sons. That is to say, the gender gap in body image was present for the undergraduates, but not for the parents. Furthermore, daughters and mothers were significantly more likely to endorse dieting than were sons and fathers. Fathers, despite their poor body image, and in contrast with mothers and daughters, did not diet in order to improve their body image.

These two studies (1, 2) have been frequently replicated. For example, Akande (3) replicated the 1985 (single generation) study using a Nigerian college-student population. Tiggeman et al. (4) also replicated the 1985 study, using a sample of 7- to 12-year-old Australian children. Lamb et al. (5) replicated the 1988 (two generations) study,

using American undergraduates and community volunteers.

Despite researchers' interest in replicating Rozin et al.'s findings in different populations, no study, to our knowledge, has proceeded to the next reasonable step of examining body image and dieting attitudes across three generations of genetically related individuals. The purpose of the current study was to extend the 1985 and 1988 findings to three generations (undergraduates, their parents, and their grandparents), and also to ask whether there exist significant inter-family correlations in body image and dieting.

Gender and generation differences in body image and dieting

Greater body dissatisfaction in females than in males, and in younger women than in older women, can be accounted for by cultural and evolutionary perspectives.

Evolutionary perspective

Physical attractiveness (waist-to-hip-to-body weight ratio, youthfulness, facial symmetry) is more important to females' than to males' mating success (6, 7). Females, therefore, should be more concerned about their body weight and shape than should males,

Key words:

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regardless of actual weight and shape. Furthermore, younger females should experience more such concern than should older females, for two interconnected reasons. First, most mothers and grandmothers of college-aged children are no longer seeking to attract long-term mates or to reproduce. Their college-aged daughters, on the other hand, are at precisely the right age to begin looking for long-term mates. Second, according to a study by Singh et al. (7), even the best waist-to-hip ratio (0.7) is made less attractive by any degree of overweight, due mainly to the perception of heavier women as being less youthful than slender women. Women attempting to attract long-term mates and fathers for their children must (according to evolutionary theory) do whatever they can to maximize their chances of attracting the best mate possible, including trying to achieve a desirable waist-to-hip-to-body-weight ratio. Younger women, then, should be more concerned about their appearance, and by extension should have relatively worse body image and a higher likelihood of dieting, than should older women or men of any age.

Cultural perspective

Garner et al. (8), in their study of cultural effects on body image during the years 1959 to 1978, documented an escalating preference for thin, angular models in *Playboy* magazine and for thin, angular contestants (and especially winners) in the Miss America Pageant. They also documented an increase in the number of weight-loss (dieting) articles in popular women's magazines during the same years (years, they note, during which women's bodies had been becoming increasingly heavy). Wiseman et al. (9) continued to document this trend for the years 1979 to 1988. They reported a continued decrease in the size of *Playboy* models until they reached anorexic proportions (85% or less of expected body weight for height) (10), as had Miss America Pageant contestants and winners. Wiseman et al. (9) noted as well a continued increase in the number of weight-loss articles published during the years studied, although these articles had begun, by the late 1980s, to advocate exercise in addition to the low-calorie diets promoted in earlier decades. Feingold et al.'s recent meta-analysis of the body image literature (11) confirmed what Garner et al. (8), Wiseman et al. (9), and almost all of the Rozin-Fallon replications have suggested [but see (12) for an exception]: gender differences in body image have increased substantially over the past fifty years.

It would seem reasonable, given these data, to predict large gender differences in body

image, with the largest differences occurring in college-aged participants, and the smallest differences occurring in their grandparents. Younger generations should develop, and attempt to achieve, thinner and thinner body ideals in response to the thinner and thinner body ideals embraced by our culture. Older generations, who would have spent their formative years looking at more realistic (i.e. larger) models and beauty pageant contestants, should hold body ideals more in tune with the images of their youth than with today's images.

Inter-family correlations in body image

There has been an interest, lately, in investigating how eating disorders aggregate within families (13-15). Karwautz et al. (15), for example, examined the genetic and environmental risk factors for anorexia nervosa, and concluded that both types of influence were important. Allison et al. (13) and Berrettini (14), among others, have discussed the family aggregation of eating disorders, and have suggested that both familial variables and genetic variables play a role in susceptibility to eating disorders. Because body image disturbances and dieting are a part of the symptomatology of the eating disorders, we wondered whether we might find evidence of inter-family correspondence for these relatively non-pathological (on their own) variables.

Hypotheses

We expect to replicate the Rozin/Fallon (1, 2) body image and dieting results and find both gender and generation differences in body image and dieting. We expect that the gender difference in body image i.e., in C-I discrepancy will be large for the youngest generation, and small to non-existent for the older generations. We also expect that the gender difference in dieting will be large and significant in the youngest generation, and smaller, but still significant, in the two older generations. Finally, we predict modest sized family resemblance in both body image and dieting.

METHODS

Participants

Participants were students in a 1998 introductory psychology class at the University of Pennsylvania, and their biological parents and grandparents. Participation was on a volunteer basis; no remuneration was given for participation.

The University of Pennsylvania is a private "Ivy League" University. Its student body is

principally from the middle and upper-middle classes, and is predominantly from the Mid-Atlantic states of the United States of America (although the University of Pennsylvania does claim a substantial foreign student population). The student return rate of 108/250 is somewhat less than 50% because the study was voluntary, and because many students had parents and/or grandparents who lived outside the United States (so that we could not easily provide postage and return postage) and so were not included in the study. The body image disparity scores from the students who participated were very similar to those that have come from full introductory psychology classes from the same time period.

Of the 250 students in the class, 108 (43.2%) returned the questionnaire. Of these 108 students, 72 (66.7%) were female, and 36 (33.3%) were male. Students' mean age was 18.4 years (SD=0.75; range 17 to 21 yr).

Ninety-four biological mothers (mean age 47.8 yr; SD=4.41; range 33 to 63 yr) and 83 biological fathers (mean age 50.2 yr; SD=5.21; range 37 to 75 yr) returned the questionnaire.

Sixty-three grandmothers (37 maternal, 26 paternal) returned the questionnaire. Their mean age was 72.1 yr (SD=5.84; range 59 to 83 yr). Additionally, 32 grandfathers (20 maternal, 12 paternal) returned the questionnaire, and their mean age was 75.2 yr (SD=4.76; range 65 to 82 yr).

Religious affiliation information from our 108 student participants was: 27.8% Jewish; 26.9% Catholic; 21.3% Protestant; 13.9% atheist/agnostic; and 11.2% other. The religious breakdown for parents and grandparents was almost identical. Our sample was: 78.6% Caucasian; 9.5% South Asian or Indian; 7.1% East/Southeast Asian or Pacific Islander; and 4.8% Hispanic. Finally, most of the families (55.8%) in our population self-reported as members of the upper-middle class. The remainder of our population was middle class (26.1%), upper class (13.9%), and lower class (4.2%).

Materials

Students, parents, and grandparents each received a different version of our anonymous questionnaire. Students placed their anonymous participant number on all questionnaires given to family members.

The questionnaire requested demographic information [age, sex, race, religion, and self-classified socio-economic background (options included lower, lower-middle, middle, upper-middle, and upper class)], and included sections asking about participants' eating habits and attitudes, and their body image.

The four-items addressing eating habits and attitudes asked (1) whether the participant is currently dieting, (2) whether the participant tends to hold back at meals in order not to gain weight, (3) whether the participant feels concerned about being overweight, and (4) whether feelings of guilt about overeating help the participant to control his or her weight. These items were scored on five-point Likert scales (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = almost always). Two further items inquired about eating habits when depressed (eat more, the same, or less), and about whether the participant thinks about food in a positive, anticipatory way (yes or no). Current self-reported weight and height were also obtained.

Participants were given the Stunkard et al.'s (16) Figure Ratings Scale, with several accompanying questions. The Figure Ratings Scale shows nine drawings of female figures and nine drawings of male figures, placed in order from extremely thin to extremely fat. Each figure is accompanied by a numerical value, ranging from 10 (for extremely thin) to 90 (for extremely fat), in 10-point increments. Respondents were encouraged to use intermediate values in their responses.

Respondents were asked to indicate the figure that best represented their current appearance (C); the figure that best represented what they would like to look like (ideal appearance; I); the same-sex figure they thought was most attractive to the other sex (A); and the other-sex figure that they themselves found to be most attractive (OA).

We used the Figure Ratings Scale and its accompanying questions to measure body image: a "good" body image consists of minimal C-I discrepancies; a "poor" body image (or "body dissatisfaction") consists of larger C-I discrepancies. We will use the terms "body image" and "C-I discrepancy" interchangeably in this report.

Note that the male and female versions of Figure Ratings Scale are not calibrated to each other. That is, the figure at "20" on the male version of the Scale might be qualitatively and quantitatively different from the analogous figure on the female version. See Gardner et al. (17) for a more detailed discussion of these psychometric shortcomings.

Procedure

We distributed questionnaires and stamped, self-addressed envelopes to students during an introductory psychology lecture. Students were instructed to place their anonymous participant number (arbitrarily assigned to each student on the first day of class) on their own questionnaire, and on all questionnaires mailed to their

family members (so that within-family analyses could later be run on these data). Students were informed, on the class prior to the class in which questionnaires were distributed, to bring in their parents' and grandparents' addresses. Only participants knew their participant number; we stressed that we had no way of attaching names to these numbers. Students were given stamped, self-addressed envelopes so that their parents and grandparents could return their surveys to us by mail. We asked participants not to discuss the questionnaires with family members until all questionnaires had been completed and returned to the experimenter. Students returned their questionnaires directly to us; parents and grandparents mailed us their questionnaires. Data were analyzed using the SYSTAT statistical package.

RESULTS

Gender and generation differences in body image

Data from all of our participants (except for one non-biological father) were used in the analyses reported in the section. As predicted, we found significant effects of gender and of generation on body image and dieting, with effects of gender outweighing those of generation.

Heaviness (BMI) and judgments of appearance (C)

Not surprisingly, analyses of variance (ANOVAs) revealed that males were (body mass index; BMI) larger than were females ($p < 0.001$). Furthermore, parents and grandpar-

ents were (BMI), and perceived themselves to be (C), larger than college student participants of the same gender ($p < 0.001$). Recall that the male and female versions of the Figure Ratings Scale are not calibrated to each other: we will therefore not discuss gender differences in C, I, A, or OA. Note, however, that under some conditions it is appropriate to discuss gender differences in discrepancies among figure ratings. For example, even though C and I cannot be directly compared between males and females, if the C-I discrepancy is positive for females, and negative for males, we can draw conclusions that are independent of scale calibration.

Ideal body size (I)

We found a significant main effect of generation on ideal body size (I), $F_{(2,366)} = 15.76$, $p < 0.01$. Post-hoc analyses revealed that grandparents had significantly larger body ideals than did parents and undergraduates, $p < 0.001$; parents had significantly larger body ideals than did undergraduates, $p < 0.01$. See Table 1 for means.

Body image dissatisfaction (CI)

Surprisingly, we found no significant main effect of gender on CI discrepancy, our body image proxy, $F_{(1,354)} = 0.74$. However, we did find a significant main effect of generation, $F_{(2,354)} = 16.83$, $p < 0.001$, and a significant gender by generation interaction, $F_{(2,354)} = 6.65$, $p < 0.005$. Grandparents' and parents' CI discrepancies did not differ from one another, but grandparents' and parents' CI discrepancies differed significantly from undergraduates' CI discrepancies ($p < 0.001$). The interaction reflects the post-hoc finding that, among grandparents and parents, females had marginally smaller CI discrepancies than did males, but among undergraduates, females had substantially larger CI discrepancies than did males. See Table 1 for means.

Beliefs about what is attractive to the other sex (A, AI)

Participants were asked to rate the same-sex figure they believed the other sex would find most attractive (A). Analyses revealed a significant main effect of generation ($F_{(2,337)} = 5.55$, $p < 0.005$): although parents and undergraduates did not choose significantly different values for A, grandparents' A's were larger than were parents' and undergraduates' A's ($p < 0.005$ and < 0.03 , respectively). See Table 2 for means.

The discrepancy between participants' A and I ratings was compared across gender and generation. This discrepancy reflects the difference between a) which figure participants believe the other sex finds most attractive and

TABLE 1

Mean scores for each participant group on each of the main body image measures.

		Students	Parents	Grandparents
C	Females	32.0 (9.7)	36.9 (11.4)	42.8 (12.4)
	Males	37.1 (12.6)	50.0 (13.0)	55.0 (12.2)
I	Females	25.0 (6.5)	27.7 (7.4)	32.5 (7.7)
	Males	36.9 (10.1)	39.0 (7.5)	42.4 (8.8)
CI	Females	7.0 (8.9)	9.2 (7.5)	10.3 (10.3)
	Males	0.2 (13.2)	10.9 (11.0)	11.9 (9.7)

Female students: $n=70$; male students: $n=34$; female parents: $n=95$; male parents: $n=82$; female grandparents: $n=60$; male grandparents: $n=31$. Standard deviations are in parentheses.

C = current figure; I = ideal figure; CI = discrepancy between current and ideal figures (a measure of body image).

TABLE 2
Mean scores for each participant group on each of the main attractiveness measures.

		Students	Parents	Grandparents
A	Females	25.4 (10.2)	25.8 (7.1)	28.1 (6.4)
	Males	34.4 (8.4)	32.2 (6.4)	37.4 (7.6)
AI	Females	-0.6 (10.3)	2.0 (8.7)	5.4 (7.3)
	Males	2.4 (8.6)	6.9 (8.8)	5.2 (8.0)
OA	Females	33.2 (7.4)	34.2 (8.4)	38.7 (9.2)
	Males	30.4 (4.9)	31.0 (5.9)	37.7 (7.9)
AOA	Females	-5.0 (10.2)	-5.2 (7.1)	-4.2 (6.4)
	Males	1.2 (8.4)	-2.0 (6.4)	3.0 (7.6)

Female students: n=70; male students: n=34; female parents: n=95; male parents: n=82; female grandparents: n=60; male grandparents: n=31. Standard deviations are in parentheses.

A= figure believed to be found most attractive by the other sex; AI= discrepancy between participants' A and ideal body size ratings; OA= other-sex figure found most attractive. AOA= discrepancy between female participants' A and male participants' OA.

For AI measures, negative numbers indicate an ideal self smaller than the figure believed to be most attractive to the other sex; positive numbers indicate an ideal self larger than the figure believed to be most attractive to the other sex.

For AOA measures, negative numbers indicate an underestimation of which size figure the other sex finds most attractive; positive numbers indicate an overestimation.

b) participants' ideal figure for themselves. Significant main effects of gender ($F_{1,337}=5.54$, $p<0.02$) and generation ($F_{2,337}=5.77$, $p<0.005$) were found. The gender by generation interaction was not significant, $F_{2,337}=2.09$. Overall, females had smaller AI discrepancies than did males. Post-hoc analyses indicated that although parents' and grandparents' AI discrepancies were not significantly different from one another, undergraduates' AI discrepancies were significantly smaller than were parents' and grandparents' AI discrepancies ($p<0.005$). Female undergraduates' mean AI discrepancy was -0.6, indicating that their ideal body size was more or less equivalent to the body size they thought males found most attractive. The mean AI discrepancies for the other groups of participants were positive values, indicating that these participants' ideal body sizes were larger than the body sizes they believed the other sex would find most attractive. See Table 2 for means.

Cross-gender body size preferences (OA, AOA)

Participants also rated the other-sex figure that they found most attractive (OA). Analyses revealed a significant main effect of generation ($F_{2,337}=17.21$, $p<0.001$): older participants pre-

ferred heavier other-sex figures than did younger participants. See Table 2 for means.

The discrepancy (difference score) between female participants' A and male participants' OA (AOA) was calculated, and vice versa. This measure tests the disparity between which figure participants believe the other sex finds attractive, and which figure the other sex (of the same generation) actually finds attractive. We found significant main effects of gender ($F_{1,337}=40.34$, $p<0.001$) and of generation ($F_{2,337}=5.55$, $p<0.005$); the gender by generation interaction was not significant, $F_{2,337}=1.28$. Females' AOA discrepancies were significantly larger than were males' AOA discrepancies, and younger participants' AOA discrepancies were significantly larger than were older participants' AOA discrepancies. Females (and younger participants) tended to underestimate the body size that males found most attractive, whereas males (and, to some extent, older participants) tended to overestimate the body size that females found most attractive. See Table 2 for means.

DISCUSSION

Gender and generation differences in dieting

As expected, we were able to replicate and extend earlier findings by Fallon et al. (1) and Rozin et al. (2). Undergraduate females were dissatisfied with their bodies, but undergraduate males were not; mothers' and fathers' current-ideal discrepancies were similar to undergraduate females' discrepancies, substantially narrowing the gender gap in body dissatisfaction. Furthermore, grandparents' body image was similar to parents' body image (i.e. the gender gap in body image remains narrowed in the later years). The gender gap in dieting follows a similar - but less dramatic - narrowing with increasing age of our sample.

The attractiveness data mirror the body image data. Undergraduate females' ideal body figure was equivalent to the figure they thought males found most attractive, suggesting that their poor body image is tied to efforts to find a mate. No other group of participants showed an equivalence in these two ratings, suggesting that for older females (who have already found long-term mates and had children) and for males (whose body weight and shape is not as integral to successful mating as it is for young females), there is less pressure to achieve the figure preferred by the other sex.

We found a significant main effect of gender ($F_{1,367}=20.84$, $p<0.001$) in dieting scores, qualified by a significant gender by generation

TABLE 3

Mean scores for each participant group on dieting attitude.

	Students	Parents	Grandparents
Females	3.0 (1.3)	2.7 (0.9)	2.8 (1.0)
Males	2.0 (0.9)	2.3 (0.8)	2.6 (0.9)

Female students: n=70; male students: n=34; female parents: n=95; male parents: n=82; female grandparents: n=60; male grandparents: n=31. Standard deviations are in parentheses.

TABLE 4

Body image, body mass, and dieting correlations for daughter-mother (DM), daughter-maternal grandmother (DGM), mother-maternal grandmother (MM), and son-father (SF) pairs.

	DM	DGM	MM	SF
C	0.08	-0.14	0.54*	0.54*
I	-0.07	0.15	0.49*	-0.02
CI	0.16	-0.16	0.32	0.61**
A	0.04	0.01	0.10	-0.26
OA	-0.06	0.05	0.07	0.14
BMI	0.08	0.00	0.50*	0.51*
Dieting	0.05	-0.24	0.32	0.22

DM correlations are based on 52 pairs; DGM correlations are based on 22 pairs, MM correlations are based on 20 pairs, and SF correlations are based on 19 pairs. C= current figure; I= ideal figure; CI= discrepancy between current and ideal figures (a measure of body image); A= figure believed to be found most attractive by the other sex; OA= other-sex figure found most attractive; BMI= body mass index; Dieting= composite dieting score. *p<0.05; **p<0.01

interaction, $F_{2,367}=4.96$, $p<0.01$. Post-hoc analyses revealed that dieting scores did not differ significantly across generation (grandparent vs parent vs student): the interaction is the result of marginally decreasing differences in dieting across generations. Male and female grandparents differ the least on dieting, followed by parents, and then followed by students. In each case, females are more like to diet than are males. See Table 3 for means.

Inter-family correlations in body image and dieting

We ran correlations for all possible combinations of participant groups on the Figure Ratings Scale and dieting measures. There were not enough paternal grandfathers (n=5) to permit family analyses using this group.

No daughter-mother or daughter-maternal grandmother correlation achieved significance. However, several mother-maternal grandmother correlations (BMI, C, and I) and father-son correlations (BMI, C, CI) did achieve signifi-

cance. For full results (excluding analyses with paternal grandfathers), see Table 4.

Furthermore, as in the prior work (1, 2), but now extended to a third generation, females (particularly undergraduate females) tended to underestimate the size of figure that males found most attractive, but males tended to overestimate the corresponding figure. This would contribute both to females' poor body image (if, indeed, females' body image is related in some causal manner to perceived male preferences), and to males' positive (little to no discrepancy between current and ideal figures) body image.

Using the cultural/media influences literature, we might attempt to account for our data by telling the following story. Grandparents and parents did not spend their formative years looking at the "anorexic" (9) models that today's youths have been exposed to. Furthermore, grandparents and parents did not spend their formative years being told to diet for weight-loss purposes to the extent that today's youths have been. They were not taught to find women with today's slender physiques attractive. If this story is correct, then it makes sense for parents and grandparents to have better body images, and to be attracted to larger other-sex figures, than undergraduates: while the latter is true in our data, the former is not. Our finding that older generations, if anything, have worse body image than do undergraduates presents a major problem for the cultural influences theory. In order to feel more confident that the cultural influences story has merit, a study similar to the Garner et al. (8) and Wiseman et al. (9) studies of media representations of the female form must be undertaken. This study would have to include data from the years 1900 to 1958, and an analysis of male-related images and messages during the entire 20th century.

Our data also fit – to some extent – our evolutionary account of body image. Gender differences in concern with appearance (i.e. in body image and dieting attitudes) should be greatest in groups who have not yet found long-term mates, and/or who have not yet had children. And the gender difference should (and did, in our data) "favor" young females – that is, young females should be more concerned with appearance (i.e. they should have worse body image, and more positive dieting attitudes) than should males of any age. According to the evolutionary account, females who best conform to the current culturally-accepted standards of attractiveness will be able to win the best mates. Males' attractiveness is simply not as integral to their mating success as is

females' attractiveness to theirs, and thus males' body image should be substantially better than females' body image (6)

Note that the cultural account focuses on cohort rather than on age effects, whereas the evolutionary account focuses primarily on age effects. Our data do not distinguish between age and cohort effects. We cannot determine whether only one of these effects is in operation, or whether both effects combine to account for our data. However, we do have data (12), also from University of Pennsylvania students, suggesting that there has been no shift in body dissatisfaction over the past 15 years; this lends some support to the age account.

A major problem for both accounts (cultural and evolutionary) is our finding that body image does not improve with age. It stays relatively constant across generations for females, but becomes worse across generations (from son to father, and then constant) for males. These accounts would predict a narrowing of these scores such that women's scores would begin to approach men's scores with each increase in sample age, not the reverse. That is, women should show improved body image, and decreased positivity towards dieting, with increasing age. However, our data (and the data from (2)) show the opposite pattern: men's body image worsens with each leap in participants' age (particularly in the leap from undergraduate to father); women's body image remains more or less constant across the different age groups.

How can we explain these data? The most plausible explanation (but one that we cannot provide evidence for, given the nature of our data) is that a) as we age, we are less and less able to maintain the figures of our youths, and that b) males and females are affected differently by these age-related changes in their bodies. Women, who were already dissatisfied with their bodies when they were college-aged, might have been close to ceiling for body dissatisfaction at that time, and thus might view their changing shapes as less significant, in terms of their body image, than might men, who had previously been satisfied. As indicated by Rozin et al. (2), concern about body image has two components: a perceived disparity/dissatisfaction, and a feeling that this disparity is important and must be a cause for action. The latter is less salient in males, in general, in spite of the linkage between body weight and heart disease.

Inter-family correlations

We found some evidence of family aggregation in our data, but not for any comparison

that included daughters. These results are in some agreement with the very low but positive correlations found by Sanftner et al. (18) in Eating Disorder Inventory scores between 7th and 8th grade children and their mothers.

The most surprising result in the within-family data occurs for the "hard" measure of BMI. There was no significant correlation between daughters' and mothers' BMI or between daughters' and grandmothers' BMI. However, mothers' and grandmothers' and sons' and fathers' BMI's were highly correlated. Bouchard et al. (19) have found evidence for a substantial genetic basis for BMI, and most of our data bear this out. Our daughter-related data suggest that daughters may be doing something special to their BMI's - presumably dieting for weight loss, which can result in both weight loss and weight gain [e.g (20)] - that has thrown them out of whack with their families' BMIs. If this is the case, then we can explain the lack of correspondence between daughters and their families on our body image measures by using a combination of the cultural and evolutionary hypotheses. College-aged women, who are beginning actively to seek long-term mates, feel that they must achieve the thin physiques endorsed by cultural messages in order to attract the best mates. As a consequence, these young women are likely to diet, and thus to distort their natural body size such that it no longer matches their mothers' or grandmothers' body size. Along with the changes in dieting attitudes and BMI come changes in body image and size-related attractiveness measures that reinforce the drive to diet. Other groups (older women, men) show within-family resemblances on the body image, attractiveness, and dieting measures because they are not as strongly targeted by cultural and evolutionary pressures to achieve slender physiques.

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